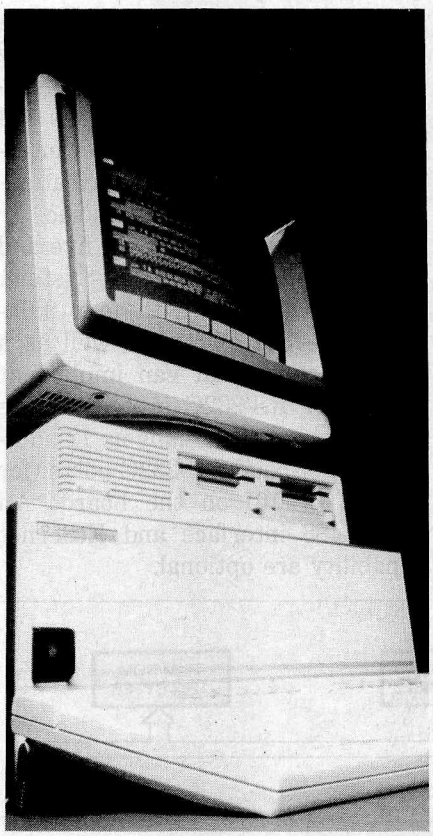
Programmable 802.3 LAN-protocol analyzer traps message frames in 1M-byte buffer

The HP4971S LAN-protocol analyzer lets you test your own IEEE 802.3 or Ethernet baseband 10M-bps LAN. Using the analyzer, you can monitor and capture message frames in a 1M-byte buffer. The analyzer uses 16 user-definable filters for packet-trapping criteria and message-transmission triggers.

You can display the captured frames in hexadecimal, ASCII, or EBCDIC, or in combinations of these three formats. Using a soft-key-based programming language, you can configure the analyzer to selectively store message frames from the network, to transmit as many as 16 predefined messages when it receives an appropriate trigger, and to measure network performance by using event timers and counters.

In its simplest mode, the 4971S stores every message frame appearing on the attached network. Each frame is time-stamped with a resolution of 32 μsec, so you can measure network-traffic speed and node-response times. You can scroll through each captured packet and mark those of interest for comparison or further examination. You can display node addresses in hexadecimal notation, or, for a more understandable data display, you can assign alphanumeric names to 500 network nodes.

For troubleshooting specific network problems, the analyzer offers focused message capture: You can use the 16 programmable filters to designate which frames to store. Filtering criteria (which include source address, destination address, and type field) use 14 hardware-trigger bytes. You can also specify maximum and minimum frame length, a feature that's useful when you're searching for partial frames or jabber problems.



Offering soft-key programmability, *16 user-definable filters, event timers and counters, and triggered message generation, the 4971S LAN protocol analyzer lets you troubleshoot IEEE 802.3 and Ethernet LANs and measure their performance.*

An additional 47 hardware-trigger bytes are available for use within the data field of the message frame. Filters share hardware-trigger bytes. For example, if you use a trigger byte to monitor the seventh byte in the data field, some or all of the filters can use only one trigger byte to monitor that byte position, even though each of the filters may be set to look for a different value in that position.

A soft-key-based programming language allows you to use the filters sequentially and in combination to further qualify frames for capture. You can program the capture to start or stop when a filter is matched, so you can see the events that lead to or follow the point of interest. The frame that matches a filter can also be positioned in the center of the buffer. You can use the filters to mark frames of interest for subsequent examination.

The 4971S also allows complex multiway branching, in which decisions are based on network events and the passage of time between events.

The 4971S supports 16 message-transmission buffers. A message can be transmitted in respose to an incoming frame within 10 msec typ. You can define messages that range from 5 to 2026 bytes in length. These limits are beyond the legal limits (1518 bytes max) of Ethernet frames, so you can test a node's reaction to message fragments and jabber problems. The 4971S can load the network by as much as 90% of its capacity. By varying the load the 4971S generates, you can test a network's sensitivity to loading.

With a keyboard, CRT display, dual floppy-disk drive, media-access unit, and cables, the 4971S costs $30,000. Delivery, eight weeks ARO.—***Steven H Leibson***

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